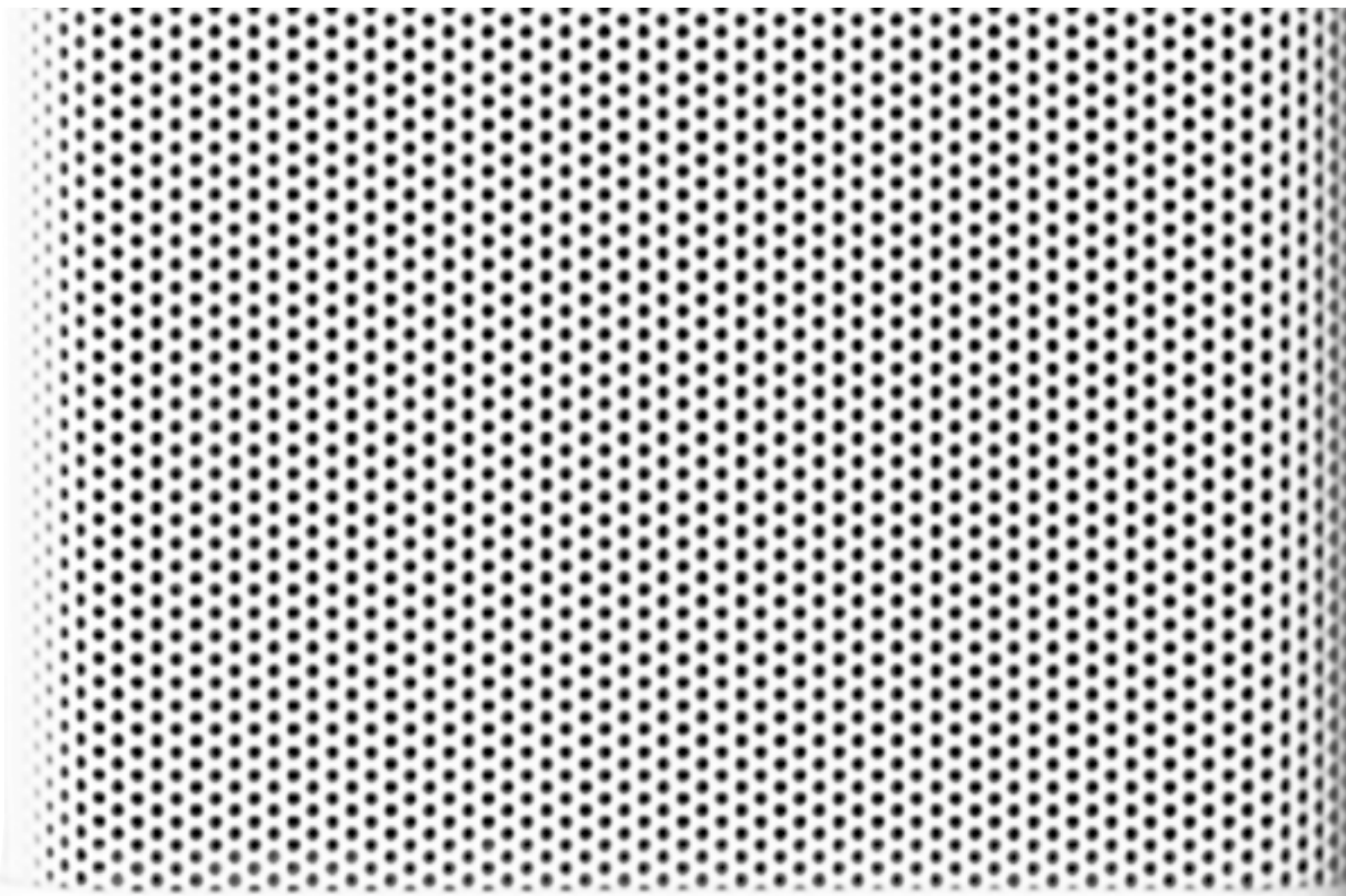
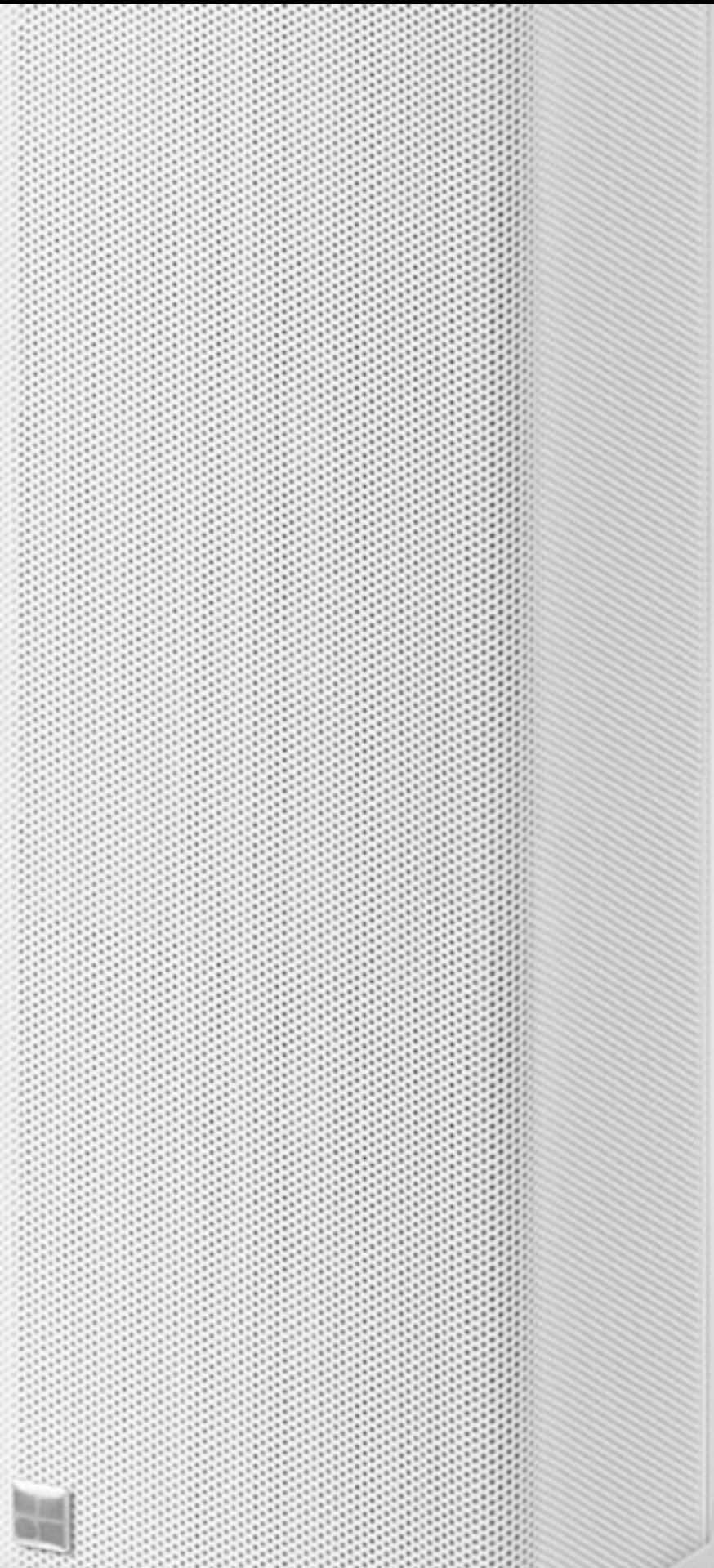


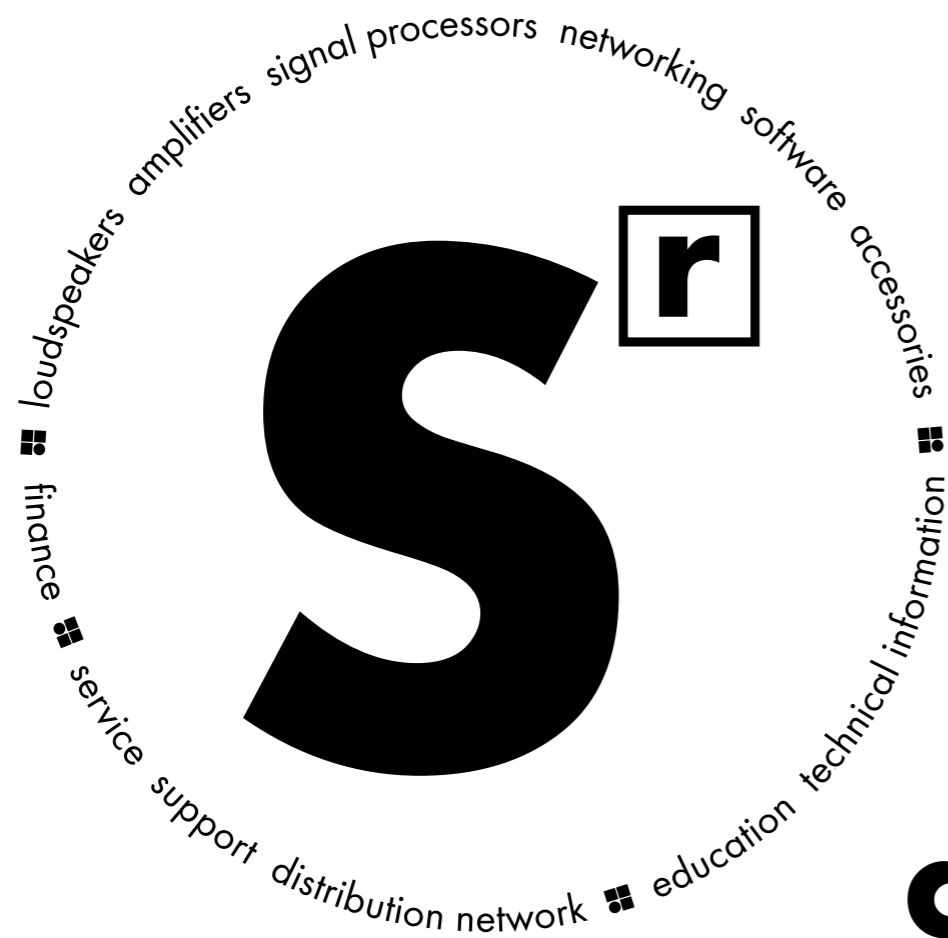
xC

xC-Series





The d&b System reality	4
The xC-Series	6
The 16C column loudspeaker	10
The 24C column loudspeaker	11
The 24C column loudspeaker with the 24C-E column extender	12
The Bi8 subwoofer	13
The xC-Series cardioid dispersion	14
The xC-Series directivity index	14
The xC-Series and Bi8 mounting accessories and examples	15
The d&b ArrayCalc simulation software	16
The d&b Remote network	17
The d&b amplifiers	18
The operation with d&b amplifiers	20
The xC-Series frequency responses	20
The d&b amplifier output modes	21
The DS10 and DS20 Audio network bridges	22
The DS100 Signal Engine	22
The xC-Series product overview	23



d&b System reality

As the name implies a d&b audiotechnik system is not just a loudspeaker. Nor is it merely a sum of the components: loudspeakers, amplifiers, signal processors, networking, software and accessories. Right from the outset the d&b audiotechnik approach was to build integrated sound reinforcement systems

that actually are more than the combination of parts: an entirety where each fits all. Every element is tightly specified, precisely aligned and carefully matched to achieve maximum efficiency. For ease of use, all the user-definable parameters are incorporated, allowing the possibility of adjustment, either

directly, via remote control surfaces, or integrated within wider networks. Neutral sound characteristics leave the user all the freedom needed to realize whatever the brief. At the same time d&b offers finance, service and support, a knowledgeable distribution network, education and training as well as technical

information, so the same optimal acoustic result is achieved consistently by every system anywhere, at any time. In reality: the d&b System reality.



The **xC-Series** column loudspeakers are designed for seamless integration into difficult acoustic and aesthetic environments. Flat and parallel mounting options create a discreet profile whilst a broad range of application requirements are addressed by steering dispersion down on to the listening plane. The xC-Series

encompasses three column loudspeakers for deployment within permanently installed applications. While utilizing different driver configurations, all xC-Series cabinets and available accessories share the same unobtrusive design features and can be properly colour matched to interior designs. The combination of high

vertical directivity and cardioid horizontal dispersion control minimizes reflections from behind the loudspeaker; reducing dispersion into the reverberant field and increasing gain before feedback, resulting in excellent speech intelligibility. Intended applications include houses of worship, conference and meeting

facilities, auditoriums, ball rooms, town halls, parliaments, lecture theatres and assembly halls.

The xC-Series

The **16C** is the smallest loudspeaker in the Series, comprised of four 4" low/mid drivers and a CD horn. The **24C** features six 4" low/mid drivers and six 1.1" dome tweeters mounted in a vertical HF array. With a further six 4" drivers, the **24C-E** is a passive extension for the 24C.

The 16C, 24C and 24C-E employ LF drivers in a unique cardioid setup radiating through waveguide elements at the front and damped ports at the rear of the cabinet. This design provides constant directivity in the horizontal plane with a broadband attenuation to the rear of 18 dB. This cardioid pattern produces minimal energy behind the loudspeaker, reducing reflections and resulting in balanced level distribution across the listening area while increasing gain before feedback when working with open microphones. Passive filtering of the low/mid drivers also minimizes unwanted dispersion in the vertical plane and adds approximately 5° downtilt to the distribution of low and mid frequencies.

The rear of the xC-Series loudspeakers feature two continuous rails for mounting purposes. The 24C-E passive extension is attached directly to the 24C, with no additional amplification or processing required. When using the 24C/24C-E combined only one bracket is required for safe mounting.

For even further low frequency extension, the B8-SUB is a very low profile compact subwoofer ideal for small and medium sized venues or where space is restricted very limited. Measuring just 170mm tall, the B8 readily fits under stages and stairs, yet is powerful enough to reproduce low frequencies down to 43 Hz using two 6.5" drivers.

d&b Custom solutions can match the paint finish of all loudspeaker cabinets and most accessories in almost any custom colour in accordance with common colour tables. All rigging fittings at the rear of the cabinet, Front links and Locking pins remain in black. Other paint finishes such as metallic are available on request.



The d&b software offering aids the entire system setup process. The d&b **ArrayCalc** simulation software allows the virtual optimization of loudspeaker line arrays, point source and column loudspeakers as well as subwoofers and their adjustment to venue conditions. The configuration simulated in ArrayCalc is assimilated by the d&b **R1** Remote control software into an intuitive graphical user interface to manage the whole system from anywhere in the venue.

The **R90** Touchscreen remote control provides quick, reliable, and effortless operation of day-to-day functions of a preconfigured d&b system, without needing expert level knowledge of audio.

d&b amplifiers are specifically designed for use with d&b loudspeakers, and are at the heart of the d&b system approach. These devices containing extensive Digital Signal Processing capabilities to provide comprehensive loudspeaker management and specific switchable filter functions to precisely target the system response for a wide variety of applications. The **5D**, **10D**, **30D** and **40D** amplifiers provide four channels and are intended for integration within permanent installations. The 5D and 10D are designed to drive smaller d&b loudspeakers and applications requiring lower Sound Pressure Levels whereas the high powered 30D and 40D are designed to drive all d&b loudspeakers at medium to high SPLs. These amplifiers all provide extensive user-definable equalization and delay capabilities to fine tune the system for artistic taste.

The d&b Audio network bridges interface between audio transport networks and AES3 digital audio signals while also providing distribution of Ethernet control data. The **DS10** supports Dante networks, while the **DS20** is used for the open standards-based Milan protocol.

The **DS100** Signal Engine is based on a specialized rack mount 3 RU audio processor with Audinate Dante networking. It provides a 64 x 64 audio matrix with level and delay adjustments at all cross points. Additional software modules provide dynamic source positioning and emulated acoustics functions.



R90 Touchscreen remote control



5D amplifier



10D amplifier



30D amplifier



40D amplifier



DS10 Audio network bridge



DS20 Audio network bridge



DS100 Signal Engine

The 16C column loudspeaker

16C column loudspeaker

The 16C 2-way passive column loudspeaker is the smallest in the Series housing four 4" neodymium drivers and a 0.75" compression driver mounted on a CD horn. The HF horn has a nominal dispersion of 90° x 40° (h x v). The 4" drivers are arranged in a unique cardioid setup radiating through waveguide elements at the front and damped ports at the rear of the cabinet. This design provides a constant directivity pattern of 90° in the horizontal plane with a broadband attenuation to the rear of approximately 18 dB. This cardioid pattern produces minimal energy behind the loudspeaker, reducing reflections and resulting in balanced level distribution across the listening area while increasing gain before feedback when working with open microphones.

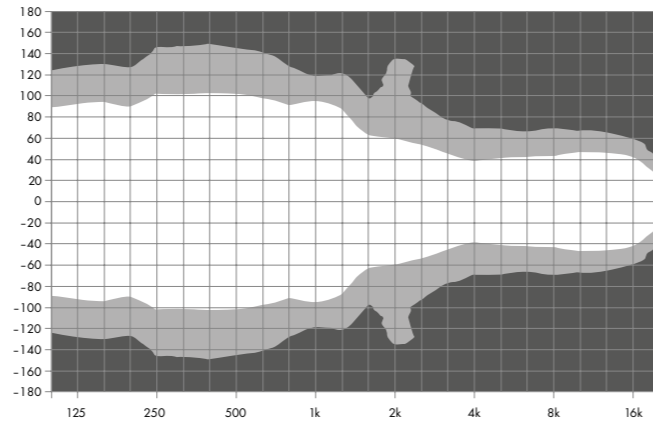
The 16C loudspeaker enclosure is constructed from an extruded aluminium back and a metal baffle, while the front and sides of the cabinet are protected by a metal grill. For mounting purposes, continuous T-slot rails are integrated into the rear of the cabinet.

System data

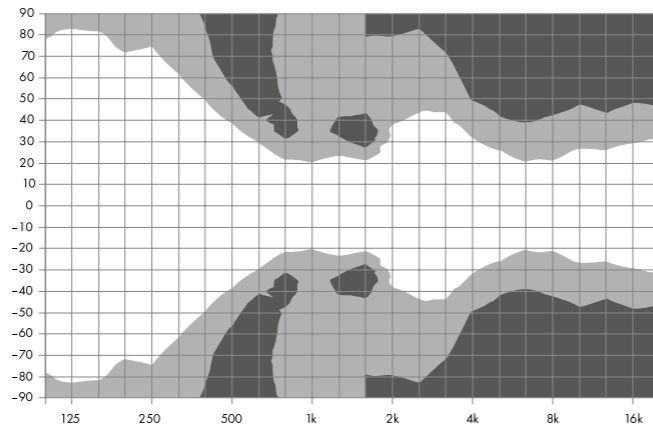
Frequency response (-5 dB standard) 110 Hz - 18 kHz
 Max. sound pressure (1 m, free field)¹
 with 5D/10D/30D/40D 122 dB
 with D20/D80 122 dB

Loudspeaker data

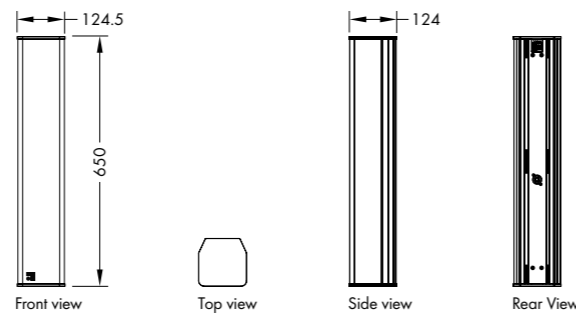
Nominal impedance 12 ohms
 Power handling capacity (RMS/peak 10 msec) 100/500 W
 Dispersion angle (h x v) 90° x 40°
 Components 4 x 4" driver with neodymium magnet
 1 x 0.75" compression driver mounted on CD horn
 Passive crossover network
 Connections 4-pole Phoenix terminal
 1 x NL4
 Weight 5 kg (11 lb)



16C horizontal dispersion characteristics²



16C vertical dispersion characteristics²



16C cabinet dimensions in mm [inch]

¹ Broadband measurement, pink noise, crest factor 4, peak measurement, linear weighting

² Dispersion angle vs frequency plotted using lines of equal sound pressure (isobars) at -6 dB and -12 dB

The 24C column loudspeaker

24C column loudspeaker

The 24C 2-way passive column loudspeaker features six 4" neodymium drivers and a HF array comprising six 1.1" dome tweeters providing a nominal horizontal dispersion of 90°. The HF array has a nominal vertical dispersion of 20°, which can be adjusted constantly between 0° and -14° to target audience listening areas. The beam produced by the low/mid drivers is tilted downwards by 5°, offering significant directivity down to 370 Hz. The 4" drivers are arranged in a unique cardioid setup radiating through waveguide elements at the front and damped ports at the rear of the cabinet. This design provides a constant directivity pattern of 90° in the horizontal plane with a broadband attenuation to the rear of 18 dB.

This cardioid pattern produces minimal energy behind the loudspeaker, reducing reflections and resulting in balanced level distribution across the listening area while increasing gain before feedback when working with open microphones.

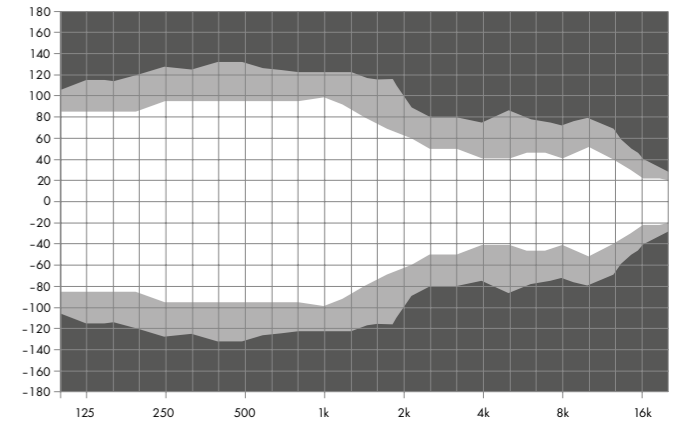
The 24C loudspeaker enclosure is constructed from an extruded aluminium back and a metal baffle, while the front and sides of the cabinet are protected by a metal grill. For mounting purposes, continuous T-slot rails are integrated into the rear of the cabinet.

System data

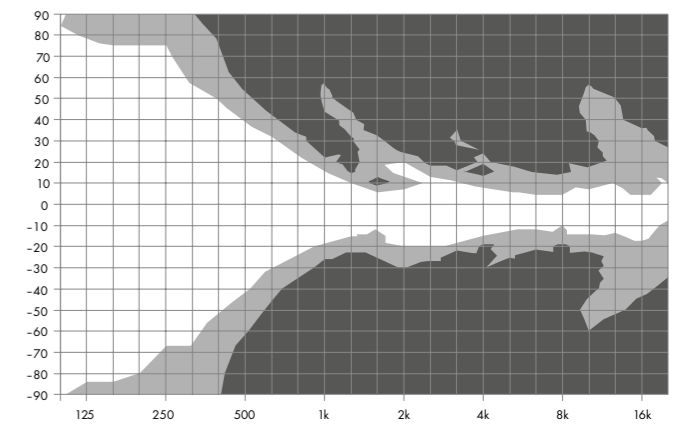
Frequency response (-5 dB standard) 110 Hz - 17 kHz
 Frequency response (-5 dB CUT mode) 150 Hz - 17 kHz
 Max. sound pressure (1 m, free field)¹
 with 5D/10D/30D/40D 126 dB
 with D20/D80 126 dB

Loudspeaker data

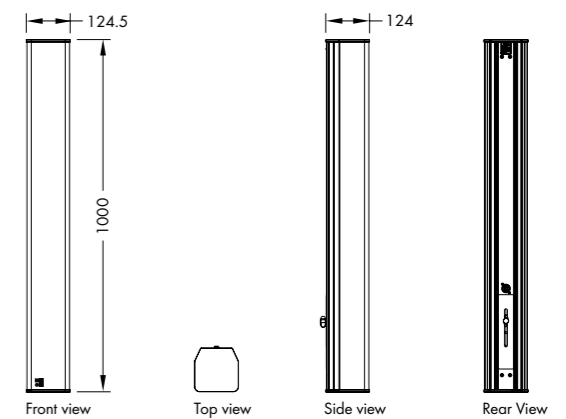
Nominal impedance 12 ohms
 Power handling capacity (RMS/peak 10 msec) 125/600 W
 Dispersion angle (h x v) 90° x 20°
 Vertical aiming of LF/MF beam -5°
 Vertical adjustment of HF section 0° to -14°
 Components 6 x 4" driver with neodymium magnet
 6 x 1.1" dome tweeter mounted in vertical horn array
 Passive crossover network
 Connections 4-pole Phoenix terminal
 1 x NL4
 Weight 9 kg (19.8 lb)



24C horizontal dispersion characteristics²



24C vertical dispersion characteristics²



24C cabinet dimensions in mm [inch]

¹ Broadband measurement, pink noise, crest factor 4, peak measurement, linear weighting

² Dispersion angle vs frequency plotted using lines of equal sound pressure (isobars) at -6 dB and -12 dB

The 24C column loudspeaker with the 24C-E column extender

24C column loudspeaker with 24C-E column extender

The combined 24C and 24C-E extend the vertical pattern control down to 190 Hz with a 5° downward tilt of the low/mid section. The HF array can be continually adjusted from 0° to -14° providing precise targeting of the audience area. The 4" drivers are arranged in a unique cardioid setup radiating through waveguide elements at the front and damped ports at the rear of the cabinet. This design provides a constant directivity pattern of 90° in the horizontal plane with a broadband attenuation to the rear of 18 dB. This cardioid pattern produces minimal energy behind the loudspeaker, reducing reflections and resulting in balanced level distribution across the listening area while increasing gain before feedback when working with open microphones.

System data

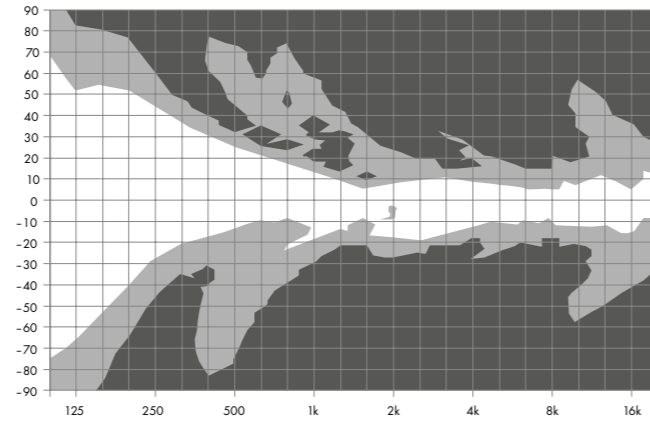
Frequency response (-5 dB standard) 110 Hz - 17 kHz
 Frequency response (-5 dB CUT mode)..... 150 Hz - 17 kHz
 Max. sound pressure (1 m, free field)¹
 with 5D/10D/30D/40D 128 dB
 with D20/D80 128 dB

Loudspeaker data 24C-E

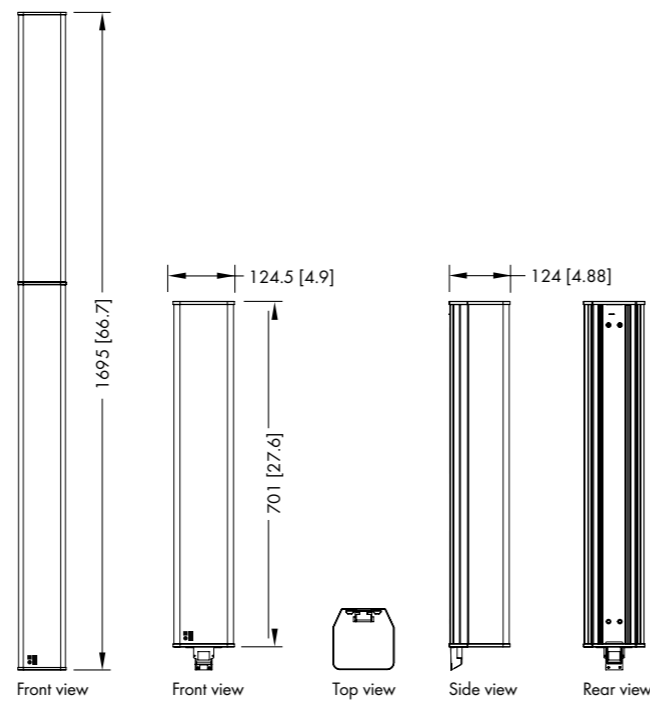
Power handling capacity (RMS/peak 10 msec) 125/600 W
 Components 6 x 4" driver with neodymium magnet
 Connections fixed cable gland with 2-pole Mate-N-Lok mini
through 24C
 Weight 7 kg (15.4 lb)

Loudspeaker data 24C with 24C-E

Nominal impedance 6 ohms
 Power handling capacity (RMS/peak 10 msec) 250/1200 W
 Dispersion angle (h x v) 90° x 20°
 Vertical aiming of LF/MF beam -5°
 Vertical adjustment of HF section 0° to -14°
 Components 12 x 4" driver with neodymium magnet
 6 x 1.1" dome tweeter mounted in vertical horn array
 Weight 16 kg (35 lb)



24C with 24C-E vertical dispersion characteristics²



24C and 24C-E cabinet dimensions in mm [inch]

The Bi8 subwoofer

Bi8-SUB

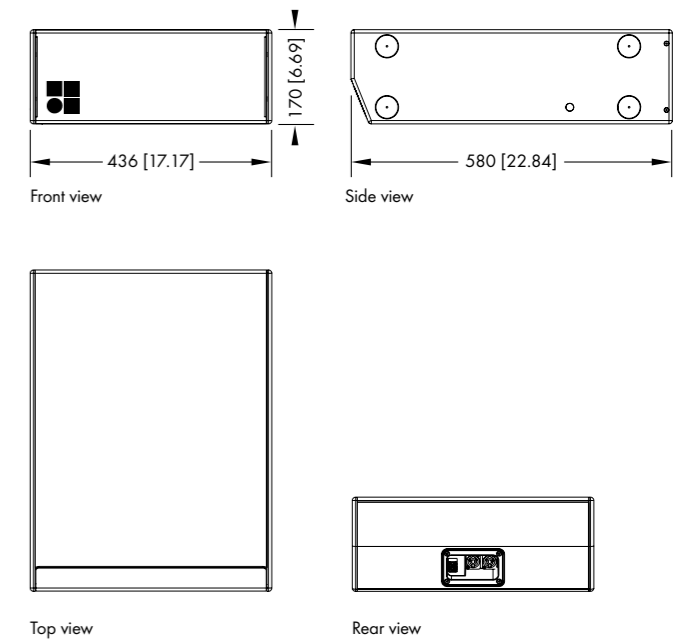
The Bi8-SUB is an actively driven, compact, high performance subwoofer. The cabinet houses two 6.5" LF driver with ferrite magnets in a bass-reflex design. Its frequency response extends from 43 Hz to 170 Hz/125 Hz. The enclosure is constructed from marine plywood with an impact resistant paint finish. The front of the cabinet is protected by a rigid metal grill backed by an acoustically transparent foam. Two M10 threaded inserts are incorporated, one on each side panel to allow the attachment of dedicated flying or horizontal brackets. The threads are covered by dummy caps in cabinet color. The caps must be removed before mounting any accessories. The bottom panel and one side panel are equipped with four recesses to accept the enclosed rubber feet. The rubber feet can be attached if desired and are intended to prevent cabinet movement and protect the respective panel against scratching.

System data

Frequency response (-5 dB standard) 43 Hz - 170 Hz
 Frequency response (-5 dB 100 Hz mode) 43 Hz - 125 Hz
 Max. sound pressure (1 m, free field)¹
 with 10D 120 dB
 with 5D/30D/40D 122 dB
 with D20/D80 122 dB

Loudspeaker data

Nominal impedance 8 ohms
 Power handling capacity (RMS/peak 10 ms) 200/800 W
 Components 2 x 6.5" driver with ferrite magnet
 Connections 2 x NL4
 1 x screw terminal (ST - up to 4 mm²/AWG 11)
 Pin assignment NL4: 2+/2-
 Weight 17 kg (37.5 lb)



Bi8-SUB cabinet dimensions in mm [inch]

¹ Broadband measurement, pink noise, crest factor 4, peak measurement, linear weighting

² Dispersion angle vs frequency plotted using lines of equal sound pressure (isobars) at -6 dB and -12 dB

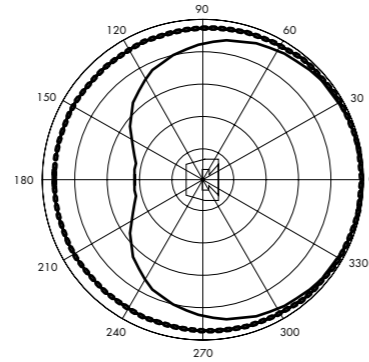
The xC-Series cardioid dispersion

The xC-Series directivity index

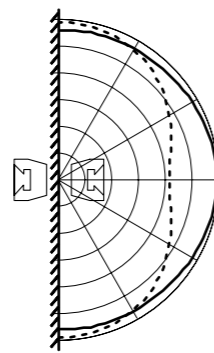
xC-Series cardioid dispersion

Conventional column loudspeakers provide no significant horizontal directivity below 2 kHz due to their physical size. At low and mid frequencies, the resulting polar pattern is almost omni-directional as shown by the dotted line in the Free field horizontal polar plot illustration. The continuous line shows the cardioid pattern of the 24C/24C-E with reduced radiation to the rear of the loudspeaker.

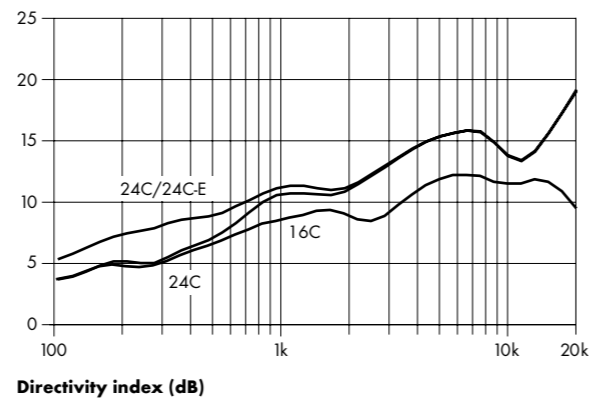
Typically, column loudspeakers are mounted onto walls or other hard plane surfaces which act as an acoustic mirror, as shown in the Wall mounted horizontal polar plot illustration. This results in the room not only being covered by the sound of the actual column loudspeaker, but also by the sound produced by its virtual mirror source from behind. In the case of conventional column loudspeakers, the mirror source radiates at a similar level as the loudspeaker itself. The combination of both sources results in a dipolar characteristic where the main energy is radiated along the walls as indicated by the dotted line. With their cardioid dispersion patterns, when similarly wall mounted, the 24C/24C-E provide an even dispersion characteristic and useful directivity, as shown by the continuous line in the Wall mounted horizontal polar plot.



Free field horizontal polar plot, conventional vs cardioid column loudspeaker



Wall mounted horizontal polar plot, conventional vs cardioid column loudspeaker



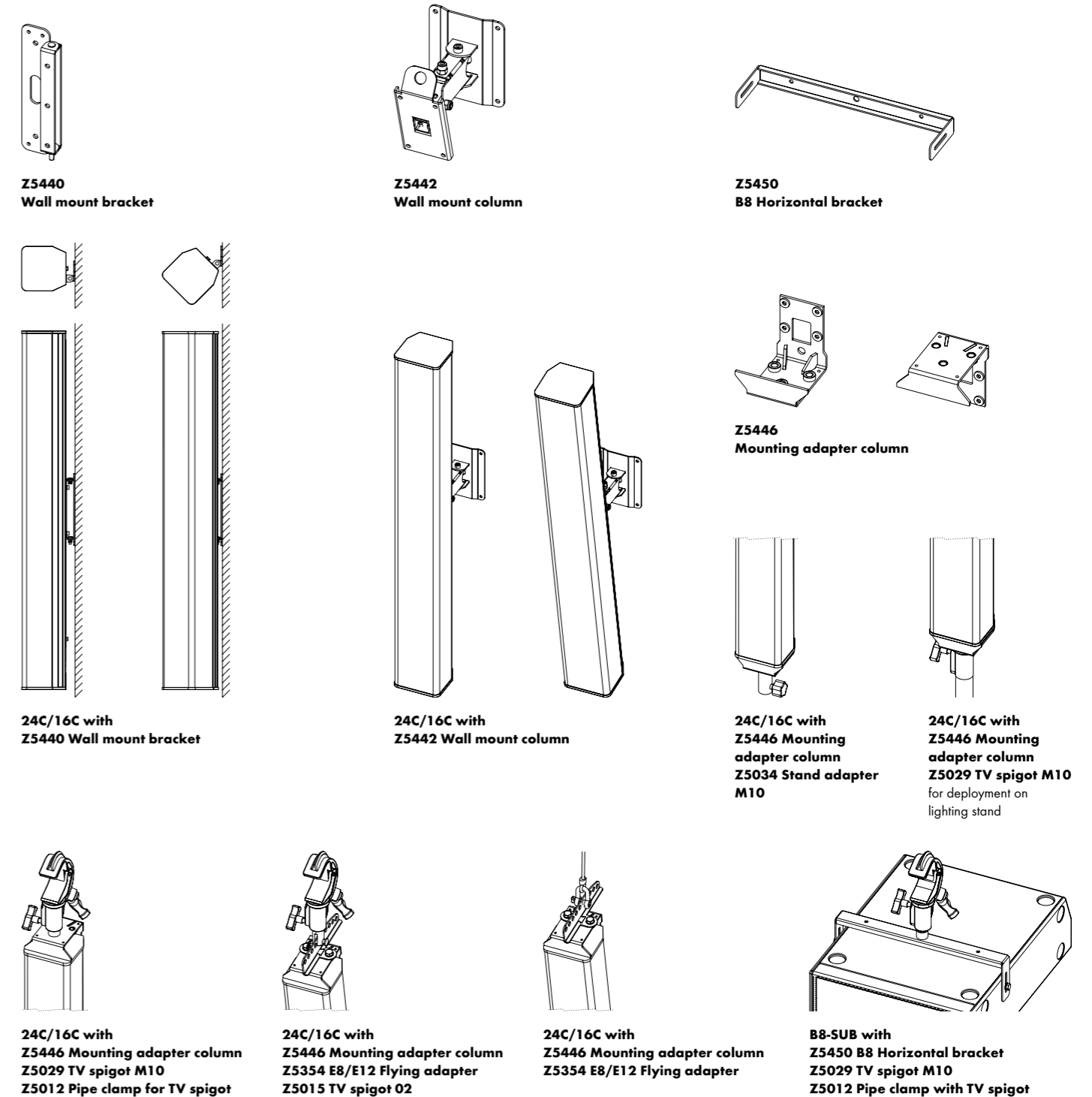
Directivity index (dB)

The xC-Series mounting accessories and examples

Bi8 mounting accessories and examples

Safety approval

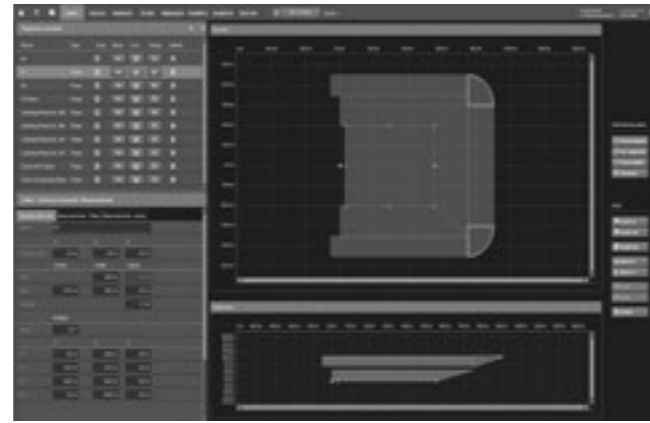
d&b loudspeakers and accessories are designed for setup and use within situations requiring compliance with the provisions and directives of the DGUV regulation 17 (formerly BGV C1).



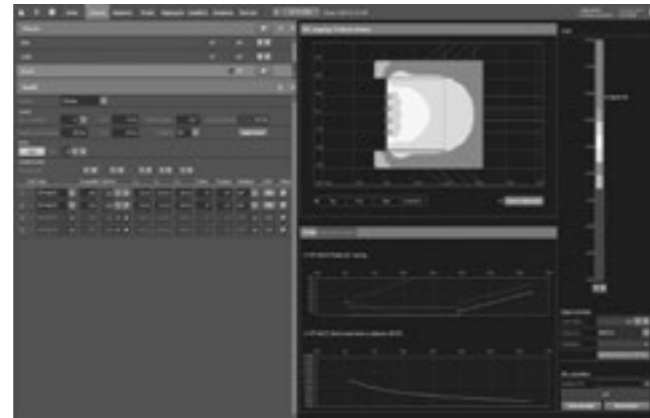
The d&b ArrayCalc simulation software

The d&b ArrayCalc simulation software is the simulation tool for d&b line arrays, column and point source loudspeakers as well as subwoofers. This is a comprehensive toolbox for all tasks associated with acoustic design, performance prediction, alignment, rigging and safety parameters. d&b ArrayCalc is available as a native stand-alone application for both Microsoft Windows¹ (Win7 64-bit or later) and Mac OS X² (10.12 or later) operating systems. In combination with the d&b Remote network, this can significantly reduce setup and tuning time and allows for precise initial simulations when planning installations. Listening planes can be defined in the venue tab, creating a three dimensional representation of any audience area in a given venue. All sources can be time aligned, and the phase response of a flown system and a ground stacked SUB array can be aligned at a definable reference point. The comprehensive simulation precisely models the actual performance of the system, taking into account input level, all system configuration options (such as CUT, CPL, HFC or INFRA), limiter headroom and air absorption. Acoustic obstacles, such as video screens, can be added to a model. Acoustic shadowing, whether by these obstacles, or a balcony overhang, is taken into consideration. The level distribution resulting from the interaction of all active sources can be mapped onto the audience areas in a three-dimensional view. The Remote ID for all devices can be managed in the amplifier tab. EASE and DXF data export capabilities are also available.

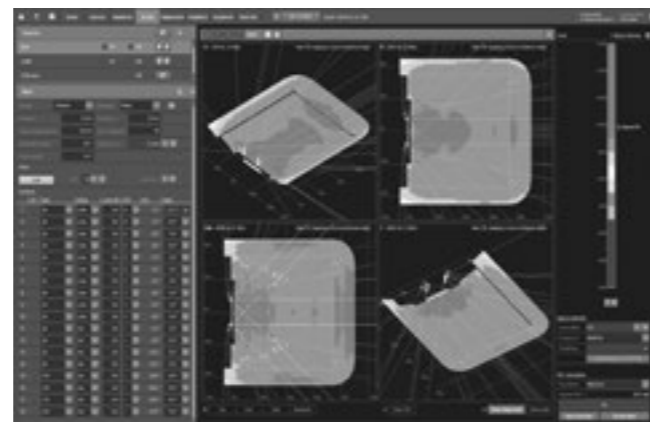
The R1 Remote control software uses the data defined in ArrayCalc to generate an intuitive graphical user interface including the complete setup of the simulated system and all configuration information. This workflow removes the need to manually transfer data from one software program to the other. Further information is provided in the d&b Amplifier and Software brochure which is available for download at www.dbaudio.com.



Venue



Sources, point sources



3D Plot quad

The d&b Remote network

The remote control capability of the d&b Remote network enables central control and monitoring of a complete d&b loudspeaker system from anywhere in the network, be it from a computer in the control room, at the mix position, or on a wireless tablet in the auditorium. This central access to all functions through the d&b Remote network, to controls as well as detailed system and device diagnostics information, unlocks the full potential of the d&b system approach. In a typical user workflow, the d&b Remote network takes settings optimized in the ArrayCalc Simulation software and applies these to all the amplifiers within the network. The importation of settings from ArrayCalc allows the system configuration to be quickly accomplished, providing more time for verification and fine tuning.

The R1 Remote control software

All features, functions and controls available on the front panel of d&b amplifiers may be remotely controlled and/or monitored using R1 Remote control software. This allows each channel of the amplifier to be controlled and enables the creation of groups of loudspeakers. When grouped together, a button or fader can control the overall system level, zone level, equalization and delay, power ON/OFF, MUTE, as well as loudspeaker specific function switches such as CUT/HFA/HFC and CPL. An offline mode is provided for preparation in advance of an event, without the amplifiers being present or connected. d&b System check verifies that the system performs within a predefined condition, while the Array verification function automatically identifies the physical position of a loudspeaker in an array to check that the system is cabled correctly. Extensive facilities for storing and recalling system settings are provided allowing these to be repeated, as and when required. For mobile applications, project files can be easily adjusted for use with a different set of equipment at another location. The R1 software is optimized for use with touch screen, mouse and keyboard and runs on both Microsoft Windows¹ (Win7 64-bit or later) and Mac OS X² (10.12 or later).

The R90 Touchscreen remote control

In installation projects the R90 Touchscreen remote control can be used for quick and reliable operation of day-to-day functions of a pre-configured d&b system without needing expert level knowledge of audio. The built-in 7" panel PC provides users with one-touch control over power, mute, level, grouping and recall of up to nine AmpPresets, entirely independent of R1.

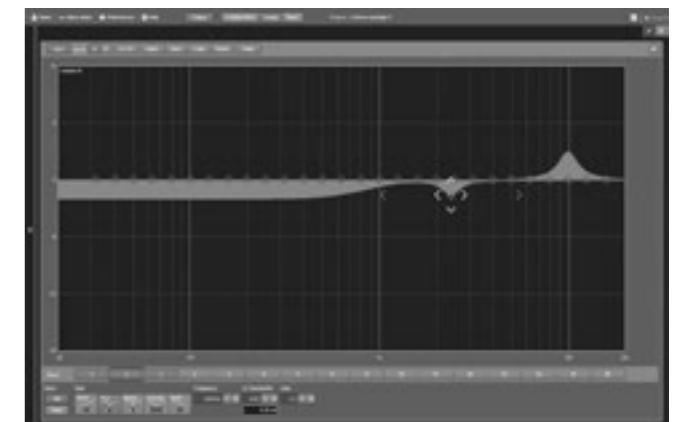
Further information is provided in the d&b xD Installation Amplifiers and Software brochure which is available for download at www.dbaudio.com.



R1 home screen



R1 in configuration mode



D20/D80 16-band equalizer in R1

¹ Microsoft Windows is a registered trademark or trademark of Microsoft Corporation in the United States and/or other countries

² Mac OS X is a trademark of Apple Inc., registered in the U.S. and other countries

The d&b amplifiers


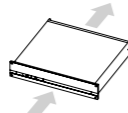
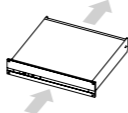

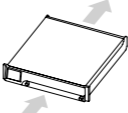
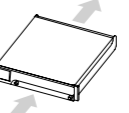
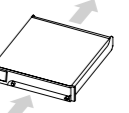
The d&b amplifiers are designed specifically to power d&b loudspeakers and are the beating heart of the d&b System reality. As such, they incorporate Digital Signal Processing for comprehensive loudspeaker management, switchable filter functions, remote capabilities and user-definable controls, to fulfil the exact needs of each application. Every loudspeaker configuration combines comprehensive system limiting, and equalization and crossover settings to ensure consistent results and optimal performance. d&b amplifiers offer

different output configurations for different loudspeaker setups, including Dual Channel mode, for passive setups, Mix TOP/SUB mode, in which two channels are driven through a single output connector, and 2-Way Active mode, which also sends the output of two channels down one connector to drive appropriate loudspeakers actively. The d&b switch functions provide selected filters to precisely tailor a wide variety of setups to their applications. Examples of these switch functions are the CSA (Cardioid Subwoofer Array)

and HFC (High Frequency Compensation) modes. CSA increases low frequency directivity control by minimising energy transmission towards the rear while HFC compensates for air absorption for loudspeakers covering far field listening positions. In addition to these functions, d&b amplifiers offer a comprehensive set of specific filters such as CUT, a cut mode for TOP loudspeakers when used with d&b subwoofers; CPL, to compensate for the coupling effect between loudspeakers in close proximity to other loudspeakers or hard objects and HFA

mode, to attenuate the high frequencies of a loudspeaker to mimic the effect of far field listening. These devices offer extended, user-definable equalization and delay capabilities, eliminating the need for external processing devices in the signal chain. All d&b amplifiers integrate with the d&b Remote network to enable the remote control and management of systems from anywhere within a network. Further information is provided in the d&b Amplifier and Software brochure which is available for download at www.dbaudio.com.

Comparison of the d&b amplifiers

	5D	10D	30D	40D	D20	D40	D80
User interface	LED indicators	LED indicators	LED indicators	Colour TFT touchscreen	Encoder/colour TFT touchscreen	Encoder/colour TFT touchscreen	Encoder/colour TFT touchscreen
Output channels	4	4	4	4	4	4	4
Input channels	4 x Dante and 4 x analog	4 x AES3 and 4 x analog	4 x AES3 and 4 x analog	4 x AES3 and 4 x analog	4 x AES3 or 4 x analog or 2 x AES3 and 2 x analog	4 x AES3 or 4 x analog	4 x AES3 or 4 x analog or 2 x AES3 and 2 x analog
Latency	1.1 msec (analog) / < 4 msec (Dante)	0.3 msec	0.3 msec	0.3 msec	0.3 msec	0.3 msec	0.3 msec
User equalizers (per channel)	8-band	2 x 16-band	2 x 16-band	2 x 16-band	2 x 16-band	2 x 16-band	2 x 16-band
Delay	1.1 - 300 msec	10 sec/3440 m	10 sec/3440 m	10 sec/3440 m	10 sec/3440 m	10 sec/3440 m	10 sec/3440 m
Maximum output power (THD+N < 0.5%, 12 dB crest factor)	4 x 600 W into 4/8 ohms	4 x 350 W into 8 ohms 4 x 700 W into 4 ohms	4 x 800 W into 8 ohms 4 x 1600 W into 4 ohms	4 x 2000 W into 8 ohms 4 x 2400 W into 4 ohms	4 x 800 W into 8 ohms 4 x 1600 W into 4 ohms	4 x 2000 W into 8 ohms 4 x 2400 W into 4 ohms	4 x 2000 W into 8 ohms 4 x 4000 W into 4 ohms
Output routing		Dual Channel, Mix TOP/SUB 2-Way Active	Dual Channel, Mix TOP/SUB 2-Way Active	Dual Channel, Mix TOP/SUB 2-Way Active	Dual Channel, Mix TOP/SUB 2-Way Active	Dual Channel, Mix TOP/SUB 2-Way Active	Dual Channel, Mix TOP/SUB 2-Way Active
Output connectors	Phoenix Euroblock	Phoenix Euroblock	Phoenix Euroblock	Phoenix Euroblock	NL4 plus central NL8	NL4 plus central NL8	NL4 plus central NL8
GPIO connector	Phoenix Euroblock 4 ports (GPI)	Phoenix Euroblock 5 ports	Phoenix Euroblock 5 ports	Phoenix Euroblock 12 ports	No	No	No
Cable compensation	LoadMatch	LoadMatch	LoadMatch	LoadMatch	LoadMatch	LoadMatch	LoadMatch
Power supply	Universal range switched mode power supply with active PFC	Universal range switched mode power supply with active PFC	Universal range switched mode power supply with active PFC	Autosensing switched mode power supply with active PFC	Universal range switched mode power supply with active PFC	Autosensing switched mode power supply with active PFC	Autosensing switched mode power supply with active PFC
Mains voltage	100 - 240 V, 50 - 60 Hz	100 - 240 V, 50 - 60 Hz	100 - 240 V, 50 - 60 Hz	100 - 127/208 - 240 V, 50 - 60 Hz	100 - 240 V, 50 - 60 Hz	100 - 127/208 - 240 V, 50 - 60 Hz	100 - 127/208 - 240 V, 50 - 60 Hz
Weight (kg/lb)	4.6/10	10.6/23.4	10.6/23.4	13.3/29.3	10.8/23.8	13.8/30.4	19/42
Dimensions	1 RU x 9.5" x 405 mm	2 RU x 19" x 435 mm	2 RU x 19" x 435 mm	2 RU x 19" x 465 mm	2 RU x 19" x 460 mm	2 RU x 19" x 465 mm	2 RU x 19" x 530 mm
Remote	OCA/AES70 via Ethernet	OCA via Ethernet/CAN	OCA via Ethernet/CAN	OCA/AES70 via Ethernet	OCA via Ethernet/CAN	OCA/AES70 via Ethernet	OCA via Ethernet/CAN
Airflow							

The operation with d&b amplifiers

The xC-Series frequency responses

Amplifier controller setups

CUT mode

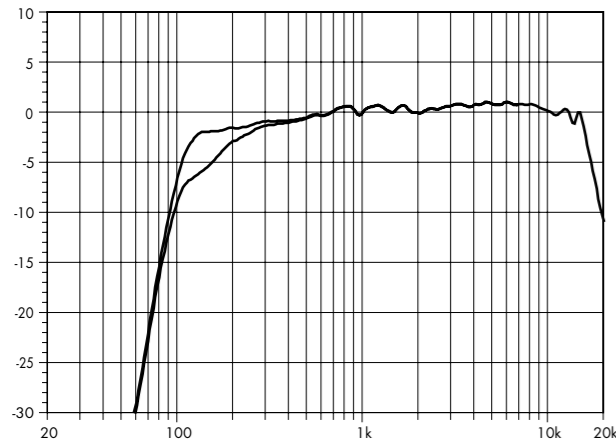
Set to CUT, the cabinet low frequency level is reduced and is configured for use with d&b active subwoofers.

HFA mode

In HFA mode (High Frequency Attenuation), the HF response of the system is rolled off. The HFA provides a natural, balanced frequency response when a unit is placed close to listeners in near field or delay use. High Frequency Attenuation begins gradually at 1 kHz, dropping by approximately 3 dB at 10 kHz. This roll off mimics the decline in frequency response experienced when listening to a system from a distance in a typically reverberant room or auditorium.

CPL function

The CPL (Coupling) function compensates for coupling effects between closely coupled cabinets by reducing the low and mid frequency level. CPL begins gradually at 1 kHz, with maximum attenuation below 400 Hz, providing a balanced frequency response when cabinets are used in arrays of two or more. The CPL function can be set in dB attenuation values between -9 and 0, or a positive CPL value which creates an adjustable low frequency boost around 65 Hz (0 to +5 dB).



24C frequency responses standard and CUT

Recommended amplifiers for installation applications

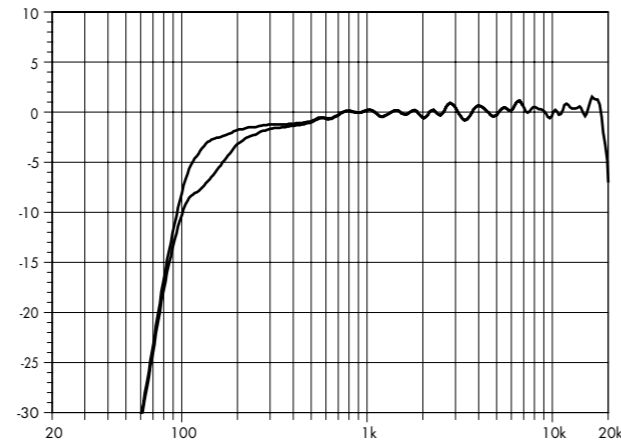
	16C	24C	24C + 24C-E	Bi8
5D	x	x	x	x
10D	x	x	x	x
30D	x	x	x	x
40D	x	x	x	x

Maximum loudspeakers per amplifier channel

	16C	24C	24C + 24C-E	Bi8
	3	2	1	2
with 5D	2	2	1	2

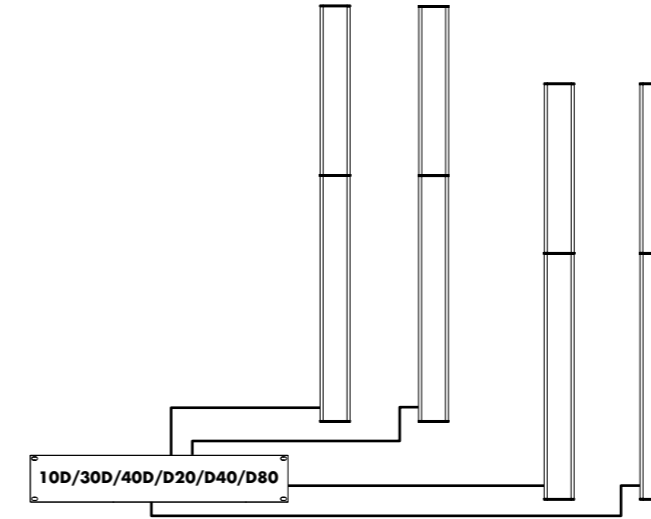
Available controller settings

	16C	24C	24C + 24C-E	Bi8
CUT	x	x	x	
HFA	x	x	x	

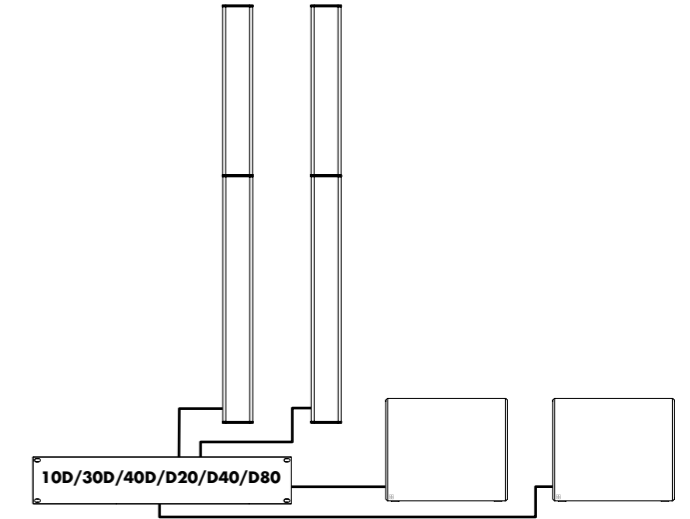


16C frequency responses standard and CUT

The d&b amplifier output modes



10D/30D/40D/D20/D40/D80 amplifier in Dual Channel mode for 24C, 24C + 24C-E and/or 16C



10D/30D/40D/D20/D40/D80 amplifier in Dual Channel mode for 24C, 24C + 24C-E and/or 16C and Bi8-SUB, 125-SUB

The DS10 and DS20 Audio network bridges

The DS100 Signal Engine

DS10 Audio network bridge

The DS10 Audio network bridge interfaces between Dante networks and AES3 digital audio signals, while also providing distribution of Ethernet control data. Positioned within the signal chain in front of the amplifiers, this 1 RU device expands the d&b system approach. Each unit can deliver up to sixteen Dante network channels via AES3 digital signal outputs. Additionally, four AES3 input channels provide access to the Dante audio network for applications such as a break-in from a Front of House console. The DS10 incorporates an integrated 5-port switch, offering a primary and redundant network for the Dante protocol, as well as advanced functions such as Multicast Filtering and VLAN modes. Using the DS10 Audio network bridge, audio signals and remote control data can be combined using a single Ethernet cable.



The DS10 Audio network bridge front view



The DS10 Audio network bridge rear view

DS20 Audio network bridge

The DS20 Audio network bridge supports the open standards-based Milan protocol rather than Dante. Milan (Media integrated local area networking) is a high level interoperability solution based on Audio Video Bridging (AVB) technology. The main advantages are deterministic behaviour (zero network congestion); improved reliability; optimum synchronization and hassle free network setup, as no special settings, such as QoS, need to be set within the switches to ensure delivery.



The DS20 Audio network bridge front view



The DS20 Audio network bridge rear view

DS100 Signal Engine

The DS100 Signal Engine is the platform underneath the Soundscape, based on a specialized rack mount 3 RU audio processor with Audinate Dante networking. It provides a 64 x 64 audio matrix with level and delay adjustments at all cross points. Additional software modules provide dynamic source positioning and emulated acoustics functions. The DS100 is a versatile tool for use within complex audio systems to route and distribute multiple audio channels to numerous amplifiers driving loudspeaker positions and zones, show relay and break out rooms. The networking capabilities with a Dante enabled processor are significant, particularly for busy, multi-room complexes. The DS100 completely integrates with the overall d&b system approach, including loudspeakers, amplifiers, rigging, transport and networking accessories and the DS10 Audio network bridge. The complete system is designed and optimized in the d&b ArrayCalc simulation software, and controlled via the d&b R1 Remote control software.



The DS100 Signal Engine front view



The DS100 Signal Engine rear view

The xC-Series product overview

Loudspeakers	Z1700.000	24C column loudspeaker black
	Z1700.001	24C column loudspeaker white
	Z1710.000	24C-E column extender black
	Z1710.001	24C-E column extender white
	Z1720.000	16C column loudspeaker black
	Z1720.001	16C column loudspeaker white
		SC Special Colour¹
		Bi8 subwoofer
Accessories	Z5440.000	Wall mount bracket black¹
	Z5440.001	Wall mount bracket white¹
	Z5442.000	Wall mount column black¹
	Z5442.001	Wall mount column white¹
	Z5446.000	Mounting adapter column black¹
	Z5446.001	Mounting adapter column white¹
	Z5450.000	B8 Horizontal bracket
	Z4550.901	B8 Horizontal bracket SC
Remote network	Z6118.000	R60 USB to CAN interface
	Z6124.000	R70 Ethernet to CAN interface
	Z6126.000	R90 Touchscreen remote control
Processing and distribution	Z4010.000	DS10 Audio network bridge
	Z4011.000	DS20 Audio network bridge
	Z4100.000	DS100 Signal Engine
Amplifiers	Z2880.xxx	5D amplifier²
	Z2760.xxx	10D amplifier²
	Z2770.xxx	30D amplifier²
	Z2830.xxx	40D Amplifier²
	Z2880.xxx	5D amplifier²
	Z2750.xxx	D20 amplifier³
	Z2850.xxx	D80 amplifier³
	Z2710.xxx	D80 amplifier³

¹ SC on request

² The complete list of installation amplifier versions is available in the xD Installation Amplifier and Software brochure

³ The complete list of mobile amplifier versions is available in the D Amplifier and Software brochure

